IN THE CLAIMS:

1. (Currently Amended) An axially extending rechargeable electrochemical cell comprising:

(a) an outer can defining an internal cavity with an open end, ~~a positive and negative~~ an electrode disposed in the internal cavity, and a terminal end cap enclosing the open end; and

(b) an end cap assembly including:

i. a flexible member ~~extending radially inwardly from~~ supported by the can, wherein the flexible member flexes from a first position towards a second position in response to internal cell pressure;

ii. a first conductive element in electrical communication with the terminal end cap;

iii. a second conductive element in electrical communication with the ~~positive~~ electrode, and in removable electrical communication with the first conductive element, wherein the second conductive element is in mechanical communication with the flexible member; and

wherein the flexible member biases the second conductive element out of communication with the first ~~and second~~ conductive element ~~elements are removed from electrical communication~~ when the flexible member flexes towards the second position in response to an internal pressure exceeding a predetermined threshold during charging.

2. (Previously Presented) The electrochemical cell as recited in claim 1, wherein the flexible member returns to the first position from the second position when the internal pressure drops below the predetermined threshold.

3. (Previously Presented) The electrochemical cell as recited in claim 1, wherein the second conductive element is connected to the flexible member and at least partially axially aligned with the first conductive element, and wherein the second conductive element is displaced axially outwardly when the flexible member is in the second position.

4. (Previously Presented) The electrochemical cell as recited in claim 1, further comprising a nonconductive spring member disposed between the terminal cap and the flexible member to limit the amount of flexible member displacement and to impose a pre-

disposed spring force for maintaining contact between the first and second conductive elements.

5. (Previously Presented) The cell as recited in claim 1, wherein the flexible member defines a radially inwardly extending cavity at its periphery, the cavity including distal ends of the end cap and first conductive element.

6. (Previously Presented) The cell as recited in claim 5, wherein the can is crimped over the flexible member to seal the open end of the cell.

7. (Original) The cell as recited in claim 1, wherein the terminal end cap is a positive terminal end cap.

8. (Previously Presented) The cell as recited in claim 1, further comprising a stop washer disposed axially downstream of the first conductive element for limiting axial movement of the first conductive element when the flexible member is in the second position.

9. (Original) The electrochemical cell as recited in claim 1, further comprising an aperture extending through the terminal end cap configured to permit gasses to escape from the cell when the internal pressure exceeds the predetermined threshold.

10. (Currently Amended) The electrochemical cell as recited in claim 1, wherein the flexible member separates the internal cavity of the can from a second internal cavity disposed within the end cap, the cell further comprising an opening extending through the flexible member to provide a conduit between the internal cavity of the can and the second internal cavity.

11. (Original) The electrochemical cell as recited in claim 10, further comprising a plug disposed within the opening that is displaceable when the internal pressure reaches a second predetermined threshold.

12. (Original) The electrochemical cell as recited in claim 11, wherein the plug is elastically deformable.

13. (Original) The electrochemical cell as recited in claim 10, further comprising a spring member disposed within the opening operable to prevent fluid from flowing from the

internal cavity of the can from the second internal cavity, wherein the spring member is displaceable when the internal pressure reaches a second predetermined threshold.

14. (Original) The electrochemical cell as recited in claim 10, wherein the cell is chargeable under a constant current charge.

15. (Original) The electrochemical cell as recited in claim 1, wherein the cell is chargeable at rate faster than one hour.

16. (Original) The electrochemical cell as recited in claim 1, wherein the cell is chargeable under a constant voltage charge.

17. (Original) The electrochemical cell as recited in claim 1, wherein the cell is chargeable under a varying current charge.

18. (Original) The electrochemical cell as recited in claim 17, wherein the varying current charge is a half-wave rectified alternating current charge

19. (Original) The electrochemical cell as recited in claim 17, wherein the varying current charge is a full-wave rectified alternating current charge.

20. (Original) The electrochemical cell as recited in claim 17, wherein the varying current charge is an alternating current offset by a direct current.

21. (Original) The electrochemical cell as recited in claim 1, wherein the cell is chargeable with a voltage that varies between a minimum threshold and a maximum threshold.

22. (Currently Amended) The electrochemical cell as recited in claim 1, further comprising a positive and negative electrode, and a gas-impermeable separator disposed between the positive and negative electrodes~~, wherein the separator is gas impermeable~~.

23. (Currently Amended) An axially extending rechargeable ~~The~~ electrochemical cell ~~as recited in claim 1, wherein the second conductive element further comprises~~ comprising:

(a) an outer can defining an internal cavity with an open end, a positive and negative electrode disposed in the internal cavity, and a terminal end cap enclosing the open end; and

(b) an end cap assembly including:

i. a flexible member extending radially inwardly from the can, wherein the flexible member flexes from a first position towards a second position in response to internal cell pressure;

ii. a first conductive element in electrical communication with the terminal end cap;

iii. a second conductive element in electrical communication with the positive electrode, and in removable electrical communication with the first conductive element, wherein the second conductive element is in mechanical communication with the flexible member, the second conductive element including:

a) a first contact having one end extending from the positive electrode, and a second end opposite the first end;

b) a second contact extending through the flexible member having a first end in contact with the second end of the first contact, and a second end opposite the first end; and

c) a third contact having a first end in contact with the second end of the second contact, and a second end opposite the first end and in removable contact with the first conductive element

wherein the first and second conductive elements are removed from electrical communication when the flexible member flexes towards the second position in response to an internal pressure exceeding a predetermined threshold during charging.

24. (Withdrawn) A rechargeable electrochemical cell charging system comprising:

(a) an electrochemical cell including:

i. an outer can defining an internal cavity with an open end, an anode and cathode disposed in the internal cavity, and a terminal end cap enclosing the open end;

ii. a linkage that establishes an electrical connection between the terminal end cap and first electrode; and

iii. a switch responsive to high internal pressure to break the linkage; and

(b) a cell charger that receives the electrochemical cell therein and is configured to supply a constant voltage charge thereto, wherein internal pressure is generated during

charging that activates the switch to terminate the charge when the internal pressure exceeds a predetermined threshold.

25. (Withdrawn) The charging system as recited in claim 24, wherein the cell further comprises a gas impermeable separator disposed between the anode and cathode.

26. (Withdrawn) The charging system as recited in claim 24, wherein the cell further comprises a ratio of anode capacity in ampere-hour to cathode capacity in ampere-hour within the range of .9:1 to 1.5:1 by weight.

27. (Withdrawn) The charging system as recited in claim 24, wherein the charger is further configured to supply a charge having a varying current to the cell.

28. (Withdrawn) The charging system as recited in claim 24, wherein the charger supplies a current to the cell that decreases as voltage within the cell increases during charging.

29. (Withdrawn) The charging system as recited in claim 24, wherein the electrical connection further comprises a first contact in electrical communication with the terminal end cap, and a second contact in electrical communication with the cathode and in removable electrical communication with the first contact, and wherein the switch interrupts the electrical communication between the first and second contacts when the internal pressure exceeds a predetermined threshold.

30. (Withdrawn) The charging system as recited in claim 29, wherein the switch further comprises a flexible member connected to the first contact and configured to bias the first contact away from the second contact.

31. (Withdrawn) The charging system as recited in claim 24, wherein the switch is reversible.

32. (Withdrawn) A rechargeable electrochemical cell charging system comprising:

(a) an electrochemical cell including:

i. an outer can defining an internal cavity with an open end, an anode and cathode disposed in the internal cavity, and a terminal end cap enclosing the open end;

ii. a linkage that establishes an electrical connection between the terminal end cap and first electrode; and

iii. a switch responsive to high internal pressure to break the linkage; and

(b) a cell charger that receives the electrochemical cell therein and is configured to supply a varying current charge thereto, wherein internal pressure is generated during charging that activates the switch to terminate the charge when the internal pressure exceeds a predetermined threshold.

33. (Withdrawn) A rechargeable electrochemical cell charging system comprising:

(a) an electrochemical cell including:

i. an outer can defining an internal cavity with an open end, an anode and cathode disposed in the internal cavity, and a terminal end cap enclosing the open end;

ii. a linkage that establishes an electrical connection between the terminal end cap and first electrode; and

iii. a switch that activates in response to high internal pressure to break the linkage; and

(b) a cell charger that receives the electrochemical cell therein and is configured to supply a voltage charge thereto, wherein the voltage alternates between a maximum threshold and a minimum threshold, wherein internal pressure is generated during charging that activates the switch to terminate the charge when the internal pressure exceeds a predetermined pressure threshold.

34. (Withdrawn) A method for charging a rechargeable cell of the type having an outer can defining an internal cavity having an open end, an anode and cathode disposed in the internal cavity, a terminal end cap enclosing the open end, an electrical linkage that removably connects the end cap with the cathode, and a switch controlling the linkage, the method comprising;

(a) supplying a constant voltage charge to the cell, wherein internal pressure accumulates within the internal cavity in response to the constant voltage charge; and

(b) activating the switch to terminate the linkage when the internal pressure exceeds a predetermined threshold.

35. (Withdrawn) The method as recited in claim 34, further comprising:

(c) activating the switch to reinstate the linkage once the internal pressure falls below the predetermined threshold; and

(d) measuring the open current voltage of the cell; and

(e) repeating steps (b) and (c) until the cell has an open circuit voltage of approximately 1.42 volts.

36. (Withdrawn) The method as recited in claim 34, further comprising connecting a plurality of additional rechargeable cells in series with the rechargeable cell during charging.

37. (Withdrawn) The method as recited in claim 34, further comprising connecting a plurality of additional rechargeable cells in parallel with the rechargeable cell during charging.

38. (Withdrawn) The method as recited in claim 34, wherein the an anode and cathode disposed in the internal cavity, a terminal end cap enclosing the open end in removable electrical communication with the cathode, and a switch controlling the electrical communication between the terminal end cap and the cathode.

39. (Withdrawn) The method as recited in claim 34, further comprising supplying a decreasing current to the cell as internal cell voltage accumulates.

40. (Withdrawn) The method as recited in claim 34, further comprising reversing the switch to re-establish the linkage when the internal pressure falls below the predetermined threshold.

41. (Withdrawn) A method for charging a rechargeable cell of the type having an outer can defining an internal cavity having an open end, an anode and cathode disposed in the internal cavity, a terminal end cap enclosing the open end, an electrical linkage establishing a removable electrical connection between the end cap and cathode, and a switch controlling the linkage, the method comprising;

(a) supplying a varying current charge to the cell, wherein internal pressure accumulates within the internal cavity in response to the charge; and

(b) activating the switch to terminate the linkage when the internal pressure exceeds a predetermined threshold.

42. (Withdrawn) The method as recited in claim 41, further comprising connecting a plurality of additional rechargeable cells in series with the rechargeable cell during charging.

43. (Withdrawn) The method as recited in claim 41, further comprising connecting a plurality of additional rechargeable cells in parallel with the rechargeable cell during charging.

44. (Withdrawn) The method as recited in claim 41, wherein the an anode and cathode disposed in the internal cavity, a terminal end cap enclosing the open end in removable electrical communication with the cathode, and a switch controlling the electrical communication between the terminal end cap and the cathode.

45. (Withdrawn) The method as recited in claim 41, further comprising reversing the switch to re-establish the linkage when the internal pressure falls below the predetermined threshold.

46. (Withdrawn) A method for charging a rechargeable cell of the type having an outer can defining an internal cavity having an open end, an anode and cathode disposed in the internal cavity, a terminal end cap enclosing the open end, an electrical linkage that removably connects the end cap with the cathode, and a switch controlling the linkage, the method comprising:

(a) supplying an voltage charge to the cell that varies between a predetermined minimum and a predetermined maximum, wherein internal pressure accumulates within the internal cavity in response to the charge; and

(b) activating the switch to terminate the linkage when the internal pressure exceeds a predetermined threshold, wherein the linkage is re-established when the internal pressure falls below the predetermined threshold.

47. (Withdrawn) A rechargeable electrochemical cell charging system comprising:

a rechargeable cell having a gauge on its outer surface operable to send a signal indicating that the outer surface is expanded at a rate that is beyond a predetermined threshold; and

a battery charger configured to (1) supply a charge to the rechargeable cell, wherein the outer surface of the battery expands as the charge is supplied, (2) receive the signal from

the gauge, and (3) terminate the charge based on a predetermined rate of change of outer surface expansion.

48. (Withdrawn) The assembly as recited in claim 47, wherein the gauge is a strain gauge having two distal ends connected to two respective conductive contact bands, and wherein the charger further comprises conductive leads connected to the contact bands to measure electrical resistance thereacross.

49. (Withdrawn) The assembly as recited in claim 48, wherein the signal from the gauge is a resistance that varies in a predictable manner relative to the outer surface expansion, and wherein the charger further includes a processor operable to measure the resistance across the strain gauge.

50. (Withdrawn) The assembly as recited in claim 47, wherein the charge is a constant voltage charge.

51. (Withdrawn) The assembly as recited in claim 47, wherein the cell further includes a temperature sensor for sensing the internal temperature of the cell, wherein the battery charger further terminates the charge based on a predetermined condition of temperature and change of outer surface expansion.

52. (Withdrawn) The assembly as recited in claim 47, wherein the strain gauge is embedded in a laminate configured to be wrapped around the cell, the laminate including: an adhesive, an insulator, the strain gauge, and a pair of contact pads disposed adjacent and in electrical communication with the strain gauge.

53. (Withdrawn) A method for determining a charge termination point of a rechargeable electrochemical cell of the type having an outer can defining an internal cavity having an open end, an anode and cathode disposed in the internal cavity, a terminal end cap enclosing the open end, and a strain gauge disposed on an outer surface of the cell whose resistance changes in response to expansion of the cell, the method comprising:

supplying a charge to the cell;

measuring the resistance of the strain gauge; and

determining the charge termination point based on the resistance changes of the strain gauge during charging.

54. (Withdrawn) The method as recited in claim 53, wherein the charge is a constant voltage charge.

55. (New) A rechargeable electrochemical cell comprising:

(a) an outer can defining an internal cavity that is closed by a terminal end cap; and

(b) an electrode disposed in the cavity; and

(c) end cap assembly including:

i. first and second contacts in removable electrical communication with each other, wherein an electrical path is formed between the terminal end cap and the electrode when the contacts are in communication, and wherein the electrical path is broken when the contacts are removed from communication; and

ii. a pressure-responsive flexible member in addition to the contacts that, in response to an elevated internal cell pressure, flexes and directly biases one of the contacts away from the other to break the electrical path.

56. (New) The electrochemical cell as recited in claim 55, wherein the second contact is in electrical communication with the electrode when the path is broken, and wherein the flexible member directly biases the second contact.

57. (New) The electrochemical cell as recited in claim 56, wherein the flexible member carries the second contact.

58. (New) The electrochemical cell as recited in claim 55, wherein the flexible member carries the directly biased contact.

59. (New) The electrochemical cell as recited in claim 58, wherein at least a portion of the flexible member is displaced a distance substantially equal to a distance that the directly biased contact is displaced when the flexible member flexes.

60. (New) The electrochemical cell as recited in claim 58, wherein the flexible member further comprises an inwardly extending arm that terminates at a centrally disposed hub, wherein the hub carries the directly biased contact.

61. (New) The electrochemical cell as recited in claim 55, wherein the directly biased conductive element is substantially centrally disposed in the internal cavity.

62. (New) The electrochemical cell as recited in claim 55, wherein the flexible member provides a seal at its periphery with the outer can.

63. (New) The electrochemical cell as recited in claim 62, wherein the outer can is crimped over the flexible member to seal the cell.

64. (New) The electrochemical cell as recited in claim 63, wherein the flexible member further retains the terminal end cap.

65. (New) The electrochemical cell as recited in claim 64, wherein the flexible member comprises an insulator.

66. (New) The electrochemical cell as recited in claim 65, further comprising a vent extending through the flexible member that enables pressurized cell contacts to flow out the cell.

67. (New) A rechargeable electrochemical cell comprising:

(a) an outer can defining an internal cavity that is closed by a terminal end cap; and

(b) an electrode disposed in the cavity; and

(c) an end cap assembly including:

i. a nonconductive flexible member extending radially inwardly from the outer can, wherein the flexible member flexes from a first position to a second position in response to internal cell pressure;

ii. first and second contacts in removable electrical communication with each other to form an electrical path extending through the flexible member between the terminal end cap and the electrode, wherein the path is broken when the flexible member flexes to the second position.

68. (New) The electrochemical cell as recited in claim 67, wherein one of the contacts moves in concert with the flexible member.

69. (New) The electrochemical cell as recited in claim 67, wherein the flexible member directly biases one of the contacts away from the other contact.

70. (New) The electrochemical cell as recited in claim 69, wherein the flexible member carries one the directly biased contact.

71. (New) The electrochemical cell as recited in claim 67, wherein the flexible member defines a centrally disposed opening, wherein the electrical path extends through the opening.

72. (New) The electrochemical cell as recited in claim 67, wherein at least one of the contacts is linked to the electrode via a flexible tab.

73. (New) The electrochemical cell as recited in claim 67, further comprising a vent extending through the flexible member that permits pressurized cell contents to flow out the cell.

74. (New) The electrochemical cell as recited in claim 67, wherein the flexible member returns to the first position when the internal cell pressure abates.

75. (New) A rechargeable electrochemical cell comprising:

(a) an outer can defining an internal cavity that is closed by a terminal end cap; and

(b) an electrode disposed in the cavity; and

(c) an end cap assembly including:

i. first and second contacts in removable electrical communication with each other to form an electrical path between the terminal end cap and the electrode; and

ii. a flexible grommet extending radially inwardly from the can, wherein the grommet flexes from a first position to a second position in response to an elevated internal cell pressure to break the electrical path.

76. (New) The electrochemical cell as recited in claim 75, wherein the outer can is crimped about a periphery of the flexible grommet to close the internal cavity.

77. (New) The electrochemical cell as recited in claim 76, wherein the periphery of the flexible grommet houses the terminal end cap.

78. (New) The electrochemical cell as recited in claim 77, wherein the flexible grommet is insulating.

79. (New) The electrochemical cell as recited in claim 75, wherein the grommet directly biases one of the contacts away from the other in response to the elevated internal cell pressure.

80. (New) The electrochemical cell as recited in claim 79, wherein the grommet carries the directly biased contact.

81. (New) The electrochemical cell as recited in claim 77, further comprising a vent extending through the grommet to allow pressurized cell contents to flow out the cell.

82. (New) A rechargeable electrochemical cell comprising:

(a) an outer can defining an internal chamber that is closed by a terminal end cap; and

(b) an electrode disposed in the cavity; and

(c) an end cap assembly including a flexible member extending radially inwardly from an axially extending portion of the outer can to divide the internal chamber into an active cell cavity housing the electrode, and a switching cavity that houses a first and second contact that connect to close an electrical path extending between the terminal end cap and the electrode, wherein the flexible member flexes and breaks the electrical path in response to an elevated internal cell pressure.

83. (New) The electrochemical call as recited in claim 82, wherein the active cell cavity is in fluid communication with the switching cavity.

84. (New) The electrochemical cell as recited in claim 83, further comprising a vent extending through the flexible member.

85. (New) The electrochemical cell as recited in claim 84, wherein the second contact is in electrical communication with the electrode when the path is broken, and wherein the flexible member directly biases the second contact.

86. (New) The electrochemical cell as recited in claim 85, wherein the flexible member carries the directly biased contact.

87. (New) The electrochemical cell as recited in claim 86, wherein the flexible member further comprises an inwardly extending arm that terminates at a centrally disposed hub, wherein the hub carries the directly biased contact.

88. (New) The electrochemical cell as recited in claim 82, wherein the flexible member provides a seal at its periphery with the outer can.

89. (New) The electrochemical cell as recited in claim 88, wherein the outer can is crimped over the flexible member to seal the cell.

90. (New) The electrochemical cell as recited in claim 89, wherein the flexible member comprises an insulator.

91. (New) A rechargeable electrochemical cell comprising:

(a) an outer can defining an internal cavity that is closed by a terminal end cap; and

(b) an electrode disposed in the cavity; and

(c) end cap assembly including:

i. first and second contacts in removable electrical communication with each other, wherein an electrical path is formed between the terminal end cap and the electrode when the contacts are in communication, and wherein the electrical path is broken when the contacts are removed from communication; and

ii. a pressure-responsive flexible member in addition to the contacts that becomes displaced in response to an elevated internal cell pressure and, in turn, displaces one of the contacts a distance substantially equal to the displacement of the flexible member to break the electrical path.

92. (New) The electrochemical cell as recited in claim 91, wherein the second contact is in electrical communication with the electrode when the path is broken, and wherein the flexible member directly biases the second contact.

93. (New) The electrochemical cell as recited in claim 92, wherein the flexible member carries the second contact.

94. (New) The electrochemical cell as recited in claim 93, wherein the flexible member further comprises an inwardly extending arm that terminates at a centrally disposed hub, wherein the hub carries the directly biased contact.

95. (New) The electrochemical cell as recited in claim 91, wherein the flexible member provides a seal at its periphery with the outer can.

96. (New) The electrochemical cell as recited in claim 95, wherein the outer can is crimped over the flexible member to seal the cell.

97. (New) The electrochemical cell as recited in claim 96, wherein the flexible member comprises an insulator.

98. (New) The electrochemical cell as recited in claim 91, further comprising a vent extending through the flexible member that enables pressurized cell contacts to flow out the cell.

99. (New) A rechargeable electrochemical cell comprising:

(a) an outer can defining an internal chamber having an open end that is closed by a terminal end cap; and

(b) an electrode disposed in the cavity; and

(c) end cap assembly including:

i. first and second contacts in removable electrical communication with each other to form an electrical path between the terminal end cap and the electrode; and

ii. a flexible member in addition to the contacts, wherein the flexible member includes an outer portion proximal the can and an inner portion extending radially inwardly from the outer portion, wherein the flexible member flexes from a first position to a second position in response to an elevated internal cell pressure to break the electrical path,

wherein the outer can is crimped about an outer portion of the flexible member to provide a seal at the open end.

100. (New) The electrochemical cell as recited in claim 99, wherein an outer portion of the terminal end cap is disposed in a groove formed at an outer periphery of the flexible member.

101. (New) The electrochemical cell as recited in claim 100, wherein the flexible member is insulating.

102. (New) The electrochemical cell as recited in claim 99, further comprising a vent extending through the flexible member that enables pressurized cell contacts to flow out the cell.

103. (New) The electrochemical cell as recited in claim 99, wherein the second contact is in electrical communication with the electrode when the path is broken, and wherein the flexible member biases the second contact away from the first contact.

104. (New) The electrochemical cell as recited in claim 103, wherein the flexible member carries the second contact.

105. (New) A rechargeable electrochemical cell comprising:

(a) an outer can extending along a centrally disposed axis, the can defining an internal chamber having an open end that is closed by a terminal end cap; and

(b) an electrode disposed in the cavity; and

(c) end cap assembly including:

i. first and second contacts in removable electrical communication with each other to form an electrical path between the terminal end cap and the electrode; and

ii. a flexible member extending from the can and symmetrically disposed about the axis, wherein the flexible member flexes from a first position to a second position in response to an elevated internal cell pressure to urge one of the contacts away from the other and break the electrical path.

106. (New) The rechargeable electrochemical cell as recited in claim 105, wherein the first contact is in communication with the terminal end cap and the second contact is in communication with the electrode, wherein the second contact is the urged contact.